Lethbridge Number Theory and Combinatorics Seminar

Monday — November 4, 2019
Room: C630
Time: 12:00 to 12:50 p.m.

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Primes in Short Intervals

Bertrand's postulate states that there is always a prime in the interval $[x, 2x]$ for any $x \geq 1$. Applying the prime number theorem, one may further show that there is approximately $\int_x^{2x} \frac{dt}{\log t}$ primes in $[x, 2x]$ for sufficiently large x. There is a more difficult question concerning the distribution of primes p in short intervals when $[x, 2x]$ is replaced by $[x, x+h]$ for some $h \leq x$ and p is required to be congruent to a modulo q for some $(a, q) = 1$. In this talk, we will discuss how short $[x, x+h]$ can be. If time allows, we will sketch a proof of the Bombieri-Vinogradov theorem in short intervals, which answers such a question.

EVERYONE IS WELCOME!

Visit the seminar web page at
http://www.cs.uleth.ca/∼nathanng/ntcoseminar/

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